

Bench Mark: Chiseled square of SW corner of SB IL-171 bridge wingwall over Des Plaines River El. 622.14

Existing Structure: S.N. 016-2455 (SB) was built in 1964 as F.A. Rte. 133, Section 0606-627VB at Sta. 65+06.90. Existing structure consists of a three span reinforced concrete deck on eight continuous 54" steel welded plate girders in spans 1 thru 3 and a single span reinforced concrete deck on eight steel 33" WF beams in span 4. The reinforced concrete deck is 8 1/2" thick, including a 1/2" microsilica concrete overlay. The substructure consists of open stub abutments founded on steel piles at the north end and by multi-column circular piers founded on spread footings. The south pier is shared with S.N. 016-2457 (SB). S.N. 016-2455 measures 374'-9" from back of north abutment to centerline of south pier, with an out-to-out deck width varying from 50'-7 1/2" to 58'-2 3/4". Piers 16, 17, and 18 are at a skew angle of 6°08'00" and Pier 19 and the North Abutment are at a skew angle of 15°03'45". The concrete deck is to be removed and replaced with traffic maintained utilizing crossovers. No salvage.

All Elevations in the proposed plans are based on NAVD88 Datum. Elevations in the existing plans are based on the NGVD29 Datum. NGVD29 Elev. 564.50 = NAVD88 Elev. 584.22.

**NOTE A:**

Existing Protective Shield to be removed. (Cost Included in "Removal of Existing Deck No. 1").

**NOTE B:**

See Roadway Plans-Bridge Approach Schedule for Proposed Drainage Quantities.

**DESIGN SPECIFICATIONS**

2002 AASHTO Standard Specifications for Highway Bridges

**DESIGN STRESSES**

**FIELD UNITS (New Construction)**

f'c = 3,500 psi  
fy = 60,000 psi (Reinforcement)  
fy = 50,000 psi (M270 Grade 50)

**FIELD UNITS (Exist. Construction)**

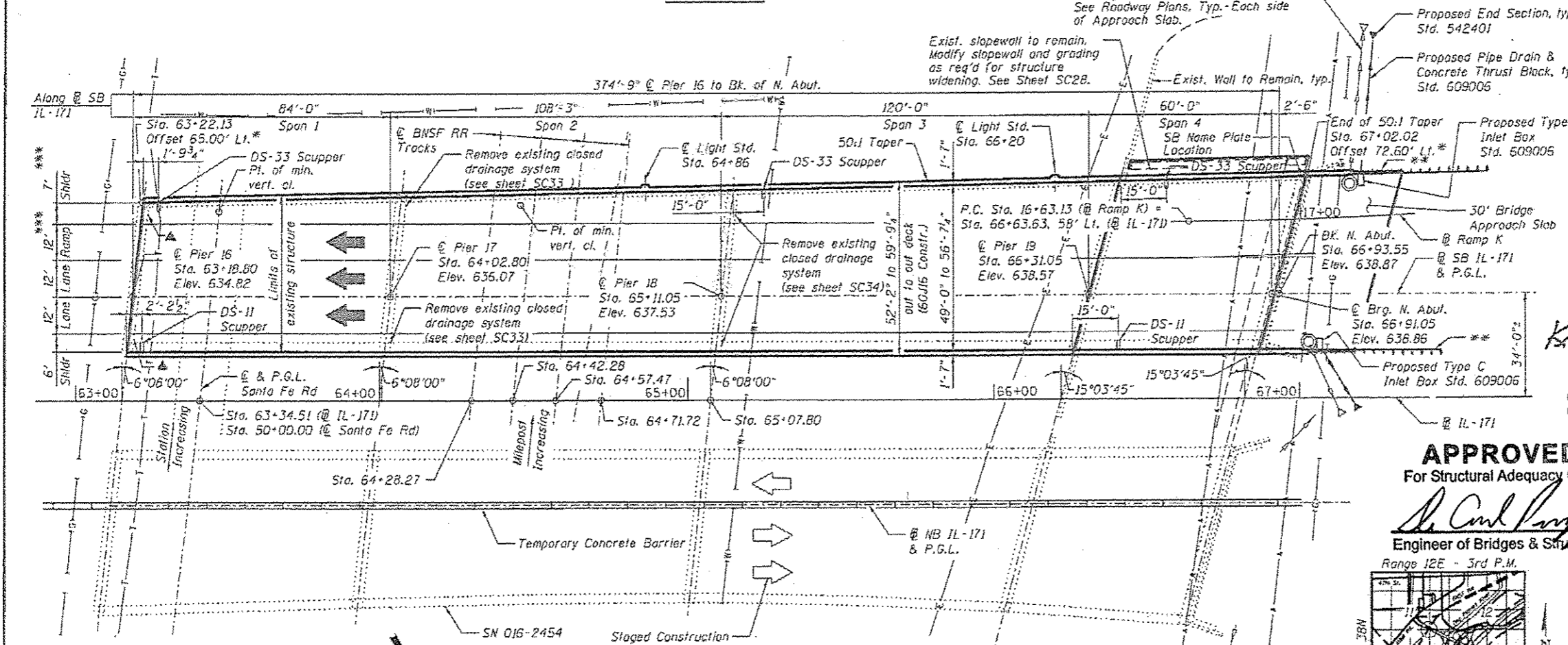
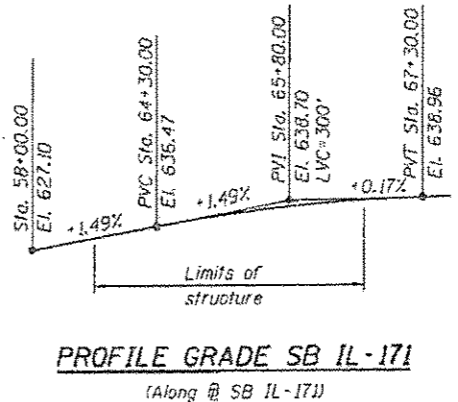
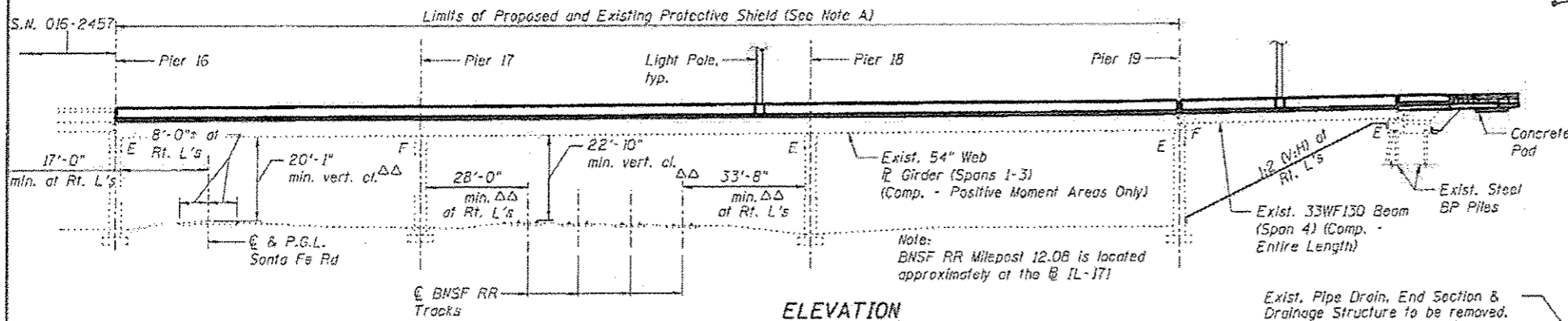
f'c = 3,500 psi  
fy = 40,000 psi (Reinforcement)  
fy = 36,000 psi (Structural Steel)

**LOADING HS20-44**

No future wearing surface allowed.

**SEISMIC DATA**

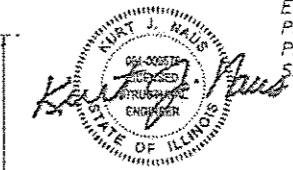
Seismic Performance Category (SPC) = A  
Bedrock Acceleration Coefficient (A) = 0.04g  
Site Coefficient (S) = 1.0



**PROFILE GRADE SANTA FE RD**  
(Along @ Santa Fe Rd)

**CURVE DATA - @ RAMP K**

P.I. Sta. = 17+59.11  
Δ = 9°08'46" (LT)  
D = 4°46'29"  
R = 1,200.00'  
L = 191.55'  
T = 95.98'  
E = 3.83'  
P.C. Sta. = 16+63.13  
P.T. Sta. = 18+54.68  
S.E. = 4.5%

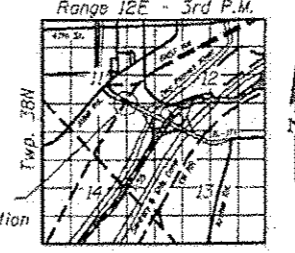


**APPROVED**  
For Structural Adequacy Only

*Kurt J. Kulis*  
Engineer of Bridges & Structures

**EXISTING UTILITY LEGEND**

- Underground Storm Sewer
- A— Aerial Electric Line
- G— Underground Gas Line
- E— Underground Electric Line
- T— Underground Telephone Line
- W— Underground Water Line
- Existing Drainage Structure



**GENERAL PLAN AND ELEVATION**  
**SB IL-171 OVER BNSF RR**  
**FAP 372 - SECTION 2013-036B-R**  
**COOK COUNTY**  
**STATION 65+07.80**  
**STRUCTURE NO. 016-2455**

**benesch**  
engineers • scientists • planners

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FILE NAME: 0162455_03J16_R01.dgn	USER NAME: jprichie	DESIGNED: JDM	REVISED:
PLT SCALE: 1"=20'-0"	PLT DATE: 12/28/2013	CHECKED: RDK	REVISED:
		DRAWN: WAK	REVISED:
		CHECKED: JDM	REVISED:

**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

SHEET NO. SC1 OF SC35 SHEETS

F.A.P. RITE: 372	SECTION: 2013-036B-R	COUNTY: COOK	TOTAL SHEETS: 821	SHEET NO.: 371
CONTRACT NO. 60J16			ILLINOIS FED. AID PROJECT	

**PLAN**

Note:  
No freefall drains will be permitted over Santa Fe Road and the BNSF RR tracks or within 10 ft. of cross arms of a railroad pole line.

▲ Remove and replace existing closed drainage system (See sheets SC23, SC24 & SC33)

△ Based on Phase I survey information dated 08/11/2008

\* Offset measured perpendicular to @ IL-171

\*\* Traffic Barrier Terminal Type 6 Std. 631031

\*\*\* Minimum width (varies)

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